

## Unit 2- Edexcel Maths (Number Revision)

Topics: Prime Numbers, LCM, HCF, Squares and Cube Numbers and their roots.

Find the HCF and LCM of the following pairs of numbers.  
60 and 84.

Work out

a)  $(-5)^3 \times \sqrt{4}$

b)  $\sqrt[3]{-64} \times \sqrt[3]{27}$

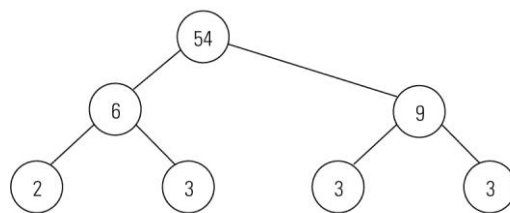
1   4   8   12   16   25   64   100

From the numbers in the list write down

a) all the numbers that are square.

b) all the numbers that are cube .

Use this factor tree to write 54 as a product of its prime factors



## Unit 2- Edexcel Maths (Number Revision)

Topics: order of operations, (BIDMAS), Understanding Index laws

Work out

a)  $8 \times 10 - 24 \div 4$

b)  $6 \times \sqrt{4} + 3^2 \times 2$

Write as a power of 3

a  $3^9 \times 3^2$

b  $3^7 \div 3^3$

c  $(3^8)^5$

Work out

$$\frac{5 \times 5^8}{5^4}$$

Work out

$$\frac{7^3 \times 7^5}{7 \times 7^6}$$

## Unit 2- Edexcel Maths (Number Revision)

Topics: Adding and subtracting fractions

Work out

$$\frac{8}{15} + \frac{11}{15}$$

Work out

$$\frac{3}{4} + \frac{1}{5}$$

Work out

$$\frac{9}{10} - \frac{1}{4}$$

At a concert,  $\frac{1}{5}$  of the audience are boys and  $\frac{2}{7}$  of the audience are girls. Work out what fraction of the audience is adults.

## Unit 2- Edexcel Maths (Number Revision)

Topics: Mixed Fractions, Multiplying fractions

Work out

$$4\frac{3}{5} + 2\frac{3}{4}$$

Work out

$$8\frac{2}{5} - 3\frac{3}{4}$$

Work out

$$\frac{3}{10} \times 3$$

Work out

$$\frac{3}{4} \times 20$$

## Unit 2- Edexcel Maths (Number Revision)

Topics: Multiplying fractions, Multiplying mixed Fractions

Work out

$$\frac{4}{5} \times \frac{1}{2}$$

Work out

$$\frac{4}{5} \times 1\frac{1}{3}$$

Work out

$$2\frac{1}{7} \times 1\frac{2}{5}$$

A book weighs  $1\frac{2}{5}$  kg.

How much will 6 books weigh?

## Unit 2- Edexcel Maths (Number Revision)

Topics: Dividing Fractions, Dividing mixed fractions

Work out

$$\frac{7}{8} \div 3$$

Work out

$$\frac{6}{7} \div \frac{3}{4}$$

Work out

$$1\frac{3}{5} \div 2\frac{7}{10}$$

Work out

$$4\frac{4}{5} \div 5\frac{1}{3}$$

## Unit 2- Edexcel Maths (Number Revision)

Topics: Conversion between fractions and decimals, arithmetic using decimals

Write the following sets of numbers in order

$$\frac{57}{100}, \frac{3}{5}, 0.58, 0.65, \frac{3}{5}$$

Work out

a  $5.46 + 6.39$

b  $9.83 - 2.347$

c  $0.045 \times 100$

d  $12.6 \div 100$

Work out

$$2.43 \times 2.1$$

Work out

$$19.2 \div 0.03$$

## Unit 2- Edexcel Maths (Number Revision)

Topics: Rounding to significant places and estimating answers.

Give these numbers correct to 1 significant figures.

a) 94.79

b) 0.0038

Work out an estimate for the value of each of following.

a)  $99.8 \times 41.2$

b)  $617 \div 4.9$

$$s = \frac{v^2 - u^2}{2a} \quad v = 4.8, u = 1.9, a = 21.1$$

Work out an estimate for the value of  $s$ .

Work out estimates for the value

$$\frac{403.08 \times 0.306}{0.398}$$



## Unit 2- Edexcel Maths (Number Revision)

Topics: Percentages fraction and decimal equivalents and work out basic percentages without a calculator.

Write each percentage as a fraction in its lowest terms

a 4%

b 28%

c 80%

Work out

32% of 400

A teacher earns £25 000.  
He receives a pay rise of 3.5%.

Work out his pay rise.

Write each percentage as a decimal

a 45%

b 4%

c 37%

## Unit 2- Edexcel Maths (Number Revision)

Topics: Percentage Increase/Decrease

Write down the single number you can multiply by to work out an increase of

- a 25%.
- b 30%
- c 4%.

Work out the single number you can multiply by to work out a decrease of

- a 5%
- b 36%
- c 12%

A toy costs £40. In a sale its price is reduced by 15%.

Calculate the sale price of the toy

A train ticket costs £54. The price is increased by 10%.

Work out the new price of the train ticket.

## Unit 2- Edexcel Maths (Number Revision)

Topics: Indices and fractional Indices

Work out the value of these expressions

a  $6^0$

b  $2^5$

c  $8^{-2}$

Work out the value of

a  $64^{\frac{1}{2}}$

b  $25^{\frac{1}{2}}$

c  $\frac{4^{\frac{1}{2}}}{9}$

Work out the value of

a  $8^{\frac{1}{3}}$

b  $125^{\frac{1}{3}}$

c  $27^{\frac{1}{3}}$

d  $\frac{27^{\frac{1}{3}}}{64}$

Work out the value of

a  $27^{\frac{2}{3}}$

b  $64^{-\frac{2}{3}}$

## Unit 2- Edexcel Maths (Number Revision)

Topics: Standard form

Write these numbers in standard form.

a) 92 100 000

b) 0.004 523

Write these as ordinary numbers.

a)  $6.07 \times 10^5$

b)  $3.5 \times 10^{-2}$

These numbers are not in standard form.  
Rewrite each number so that it is in standard form.

a  $67 \times 10^2$

b  $0.027 \times 10^4$

c  $0.034 \times 10^{-3}$

Work out and give your answer in standard form.

a  $(3 \times 10^5) \times (2 \times 10^2)$

b  $(5 \times 10^4) \times (7 \times 10^3)$

## Unit 2- Edexcel Maths (Number Revision)

Topics: Surds

Find the value of the integer  $k$ .

a  $\sqrt{18} = k\sqrt{2}$

b  $\sqrt{98} = k\sqrt{2}$

Simplify

$$\sqrt{72}$$

Expand

a  $\sqrt{2}(3 + \sqrt{2})$

b  $(\sqrt{3} + 5)(2 + \sqrt{3})$

Rationalise the denominators and simplify your answers.

a  $\frac{21}{\sqrt{3}}$

b  $\frac{\sqrt{3} + 15}{\sqrt{3}}$

## Unit 2- Edexcel Maths (Number Revision)

Topics: simplifying ratios and sharing a quantity

Write each ratio in its simplest form.

- a 4 : 8
- b 12 : 15
- c 150 : 17

Write each ratio in the form  $1 : n$ .

- a 3 : 12
- b 5 : 40
- c 2 : 9

Orange paint requires red and yellow paint to be mixed in the ratio 5 : 3.

a If you have 400 ml of red paint, how much yellow paint do you need?

b If you have 1200 ml of yellow paint, how much red paint do you need?

Share £3.45 in the ratio 2 : 3